

REMARKS

Claims 98 - 126 are now pending in this case. Claims 1 - 97 have been canceled without prejudice. Claims 102, 107, 108 and 119 have been amended. Applicants reserve the right to pursue the original claims and other claims in this and other applications. Applicants respectfully request reconsideration of the subject application in light of the above claim amendments and the following remarks.

Claims 98-101 and 107-123 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Nozaki et al. (US 6,570,222). This rejection is respectfully traversed.

Independent claims 98, 107, and 119 each recite, *inter alia*, a method of forming an image sensor comprising "forming an isolation gate," which is used to inhibit electron flow.

Applicants respectfully disagree that Nozaki et al. discloses the above limitation. Nozaki et al. discloses using an element isolation region having an STI structure in place of the LOCOS. Nozaki et al., however, does not disclose any additional structure, much less an isolation gate, to isolate adjacent pixels. As applicants previously submitted, the reset or address transistor 13b in Nozaki et al. plays an active part in the operation of the pixel and is not there to reduce dark current and/or prevent charge from moving from one pixel to another, as does the claimed isolation gate. Therefore, independent claims 98, 107, and 119 patentably distinguish over Nozaki et al.

Moreover, independent claim 98 recites "forming an isolation gate over said isolation region and over at least a portion of a connection region formed adjacent to said isolation region." Nozaki does not teach or suggest this limitation, for example, as shown in figure 7, where reset/address transistor 13b is does not extend over a portion of a doped layer. Therefore, independent claim 98 is allowable for the above additional reason.

To advance the allowance of the subject application, independent claim 107 has been amended to recite "forming an isolation gate ... substantially surrounding said photosensor." Nozaki does not teach or suggest this limitation. Figures 8-15 of Nozaki show top views of the photodiode and the reset or address transistor 13b where transistor 13b does not surround the photodiode. Therefore, independent claim 107 is allowable for the above additional reason.

Similarly, independent claim 119 has been amended to recite "forming an isolation region substantially surrounding said pixel." As applicants submitted above, Nozaki does not teach or suggest this limitation. Therefore, independent claim 119 is allowable for the above additional reason.

Claims 99-101, 108-118, and 120-123 depend from independent claim 98, 107, or 119 and are therefore patentable at least for the reasons mentioned above. In view of the above, the subject rejection has been overcome; withdrawal of the same is respectfully requested.

Claims 102-106 and 124-126 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Nozaki et al. in view of Casper (US 5,835,433). This rejection is respectfully traversed.

Applicants respectfully disagree that there is motivation to combine Nozaki et al. and Casper to arrive at the claimed invention. The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. MPEP § 2143.01. In this case, neither Nozaki et al. nor Casper teaches or suggests that they be combined. Therefore, the present invention as recited independent claims 102 and 124 is not obvious over the cited references.


Claims 103-106 and 125-126 depend from independent claim 102 or 124 and are patentable at least for the reasons mentioned above. In view of the above, the subject rejection has been overcome; withdrawal of the same is respectfully requested.

In view of the foregoing, each of the presently pending claims in this application is believed to be in condition for allowance. Accordingly, the Examiner is respectfully requested to review and pass this application to issue.

No fee is believed to be due for this Amendment. Should any fees be required, please charge such fees to Deposit Account No. 04-1073.

Respectfully submitted,

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